

## Population status and habitat preferences of critically endangered *Dipterocarpus littoralis* in west nusakambangan, indonesia

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### Abstrak

The conservation of the endemic tree species *Dipterocarpus littoralis* (Bl.) Kurz. is hampered by the paucity of information on its population biology and ecology. Consequently, a targeted survey was carried out in the West Nusakambangan Nature Reserve to assess its population size and structure as well as habitat preferences. In total, 676 individuals of *D. littoralis* were located at 52 locations, with an extent of occurrence of 3.66 km<sup>2</sup> and an area of occupancy of 1.71 km<sup>2</sup>. The population had an inverse-J-shaped distribution of diameter at breast height (DBH), with 63% of individuals in the 0-5 cm class and another 21% in the 5-10 cm class; only 11 (1.6%) mature individuals (DBH30) were found. *D. littoralis* was associated with steep, low, southwest-facing sites and sites that had high litter cover and thickness. Illegal logging and fuel-wood chopping were the main threats to *D. littoralis* and its habitat. In addition, an invasive shrub, Langkap (*Arenga obtusifolia*, Arecaceae), was a potential competitor with the seedlings throughout the reserve. In view of its endemism, narrow range and localized distribution, small population, environmental preferences, and the severe threats from anthropogenic activities and invasive species, *D. littoralis* appears to more than justify its conservation status of Critically Endangered.

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Status Populasi dan Preferensi Habitat Jenis Kritis *Dipterocarpus Littoralis* di Nusakambangan Barat, Indonesia. Usaha konservasi jenis endemik *Dipterocarpus littoralis* (Bl.) Kurz. terhambat karena kurangnya informasi mengenai biologi dan ekologi populasi tumbuhan ini. Oleh karena itu pada penelitian ini dilakukan survey terarah di Cagar Alam Nusakambangan Barat untuk mengetahui struktur dan ukuran populasi serta preferensi habitat dari *D. littoralis*. Total sebanyak 676 individu *D. littoralis* di temukan di 52 lokasi dengan tingkat keberadaan (extent of occurrence) 3,66 km<sup>2</sup> dan luas area yang ditempati (area of occupancy) 1,71 km<sup>2</sup>. Populasi *D. littoralis* memiliki

sebaran diameter batang setinggi dada (DBH) berbentuk huruf J terbalik dengan persentase individu dalam kelas DBH

0-5 cm sebesar 63%, kelas 5-10 cm sebesar 21% dan individu dewasa (DBH 30) hanya sebesar 1,6%.

Keberadaan *D.*

*littoralis* berasosiasi dengan lokasi yang terjal, rendah, menghadap ke tenggara dan memiliki tutupan serta ketebalan

serasah yang tinggi. Penebangan dan pengambilan kayu bakar secara liar merupakan ancaman utama terhadap

keberadaan *D. littoralis* dan habitatnya. Selain itu, tumbuhan invasif Langkap (*Arenga obtusifolia*, *Areceaceae*) yang

tersebar di seluruh cagar alam merupakan saingan utama anakan *D. littoralis*. Karena bersifat endemik, area sebaran

yang sempit dan terlokalisasi, ukuran populasi yang kecil, preferensi terhadap habitat tertentu, dan ancaman yang serius

dari aktifitas manusia dan jenis invasif, maka *D. littoralis* memiliki dasar yang kuat untuk tetap dalam status konservasi

Kritis (Critically Endangered).